

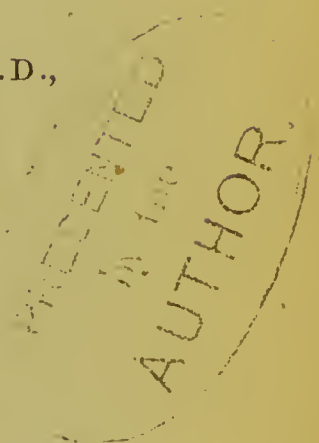
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VENESECTION,

ITS ABUSE FORMERLY—ITS NEGLECT AT THE
PRESENT DAY.

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PREFATORY REMARKS.

THIS paper on Venesection was prepared at the invitation of a Committee of the Massachusetts Medical Society, and was published by that Society. The subject I deem of so much importance that I have had a few extra copies printed. If it contribute, in the smallest degree, towards changing the opinions of the profession in regard to the great value of Venesection, when used *rationaly*, my object is attained. I believe that sometimes lives are lost, and at others severe diseases are allowed to pursue their course, with very dire effects upon the human constitution, for want of venesection.

H. I. B.

DECEMBER, 1871.

113 Boylston Street.

VENESECTIO.

GENTLEMEN :

I have long felt that some one ought to speak upon the above subject. No one has done so in Massachusetts. Having had a little but a very *keen* experience, authorizing me, as I think, to speak, I am here for that purpose. I wish to draw the attention of the middle-aged practitioner who has lost his own lancet or who keeps his father's in a rusty state in his pocket or in some corner of his study, as a mere memorial of the past. But more especially do I desire to interest the young men just entering the profession, who have been taught by wise instructors that bleeding is a process not to be resorted to, at present, in hardly any case, because, forsooth, 1st, one cannot hope to strangle an acute disease ; and 2d, because it is better *never* to bleed than to do so extravagantly, as our fathers did, for they sometimes killed their patients by too much bleeding, &c. &c. But we, if we follow such doctrines, will, as I believe, let some of ours die from neglecting the remedy.

Amid the great changes that have taken place in medical opinion during the last half century, I know of no remedy that has suffered more in the estimation of physicians and of the public than this of Venesection as a Therapeutic Measure.

I have seen it, at one time, used absurdly and without stint. I see it now almost, if not quite, abandoned by all. Students are not taught the art as among the legitimate objects of minor surgery; and old men shrink from performing it because so long unaccustomed to it.

Early in my practice I frequently refused the solicitations of healthy men and women, asking for venesection, they having been bled annually for a long time, and, as they stated, with great comfort to themselves. I have known Bouillaud and his followers, in their zeal for venesection, "*coup sur coup*," go far beyond the bounds of reason and of prudence.

I admit that it is quite natural, and also exactly right, that the strongest anathemas should be hurled by professional and lay opponents against such extravagances in blood-letting. But while admitting most freely all this, I contend that we, of the present hour, have fallen into the opposite extreme of folly, and that the opinions held now by the profession, in consequence of which blood-letting is so wholly neglected, are as irrational, though perhaps not so widely injurious, as the Sangrado mode of practice of former days. The bleeders have now been so effectually silenced, that we have virtually thrown aside, as worse than worthless, one of the most valuable of all the therapeutic means which the long experience of the ages has taught us.

It is in the hope of doing something towards bringing the profession back to reason on this point that I agreed to prepare this paper, based upon my limited experience in venesection. I shall cite four cases as illustrative of that experience. They are spread over forty years of my professional life. Their records and my running commentaries upon them will, I think, tend to show—*In the first case*, how human life was probably shortened and certainly made more miserable by venesection, as carried on by our fathers

in medicine. *In the second case*, we shall find all the severer symptoms of a violent, acute, cardiac disease were instantly relieved by venesection, and the patient brought from a state of great torture to one of comparative comfort, and although the disease was not "strangled," it was apparently made milder, and ran favorably its course up to perfect health. *In the third case*, all the severer symptoms of congestion of the lungs, combined with great obstruction of the heart and dropsical effusions in various parts of the body, occurring in a case of chronic hypertrophy of the heart with valvular disease, were manifestly and decidedly relieved after, and, as I believe, in consequence of venesection, the patient gaining thereby a "new lease of life." And finally, *in the fourth case*, I know that coincident with a neglect of venesection came death, and my belief is that possibly, nay probably, if venesection had been performed, life would have been saved.

The four cases illustrate the three epochs of medical opinion on the question of venesection, and foreshadow, I trust, the fourth that is about commencing.

First—The epoch of arrant folly that sanctioned and required an extravagant and wholly improper use of venesection.

Second—The period of scepticism as to its value in many cases, and a complete disapproval of the inordinate use of it as in the previous epoch.

Third—The effete epoch of actual cowardice in its use, and virtual abandonment of the remedy which is demanded by many at the present time.

Fourth—The *hoped-for period* of the future, when venesection, like other powerful remedies, *will be used rationally* and to the saving of human life.

CASE I.

Forty years ago, when House Physician of the Massachusetts General Hospital, I protested against venesection at the very moment that by orders of my superior, the attending physician, I opened a vein in the arm of a girl. The following are the circumstances of her case: She was 21 years old, unmarried. Her mother had died with disease of the heart. The girl entered the Hospital June 21, 1831. Three years previously she had been there with what was called "neuralgia," and she then had pain in the left side of the chest, with dyspnœa. She was also unable to raise her left arm. These symptoms had followed after a fall from a chaise, resulting in a fracture of the clavicle, and some injury to the ribs. For two years and a half previous to her entrance, when I first saw her, she had had violent attacks referable to the heart. She stated that the first attack was thought to be one of croup, and in all subsequent attacks she had had frequent desire to "raise phlegm from the throat." They were however chiefly marked by very great palpitation and dyspnœa, with a choking sensation and a very rapid and feeble pulse. They had occurred quite often; and for them she had been bled 93 times — i. e., once in 10 days during two years and a half! The catamenia had been regular and natural. She had had some dysuria. She entered at the beginning of a paroxysm, and was suffering so much that no full account could be obtained of her history. I reported her as being in bed, looking very thin and pallid. The superficial veins were every where distended with very pale-colored blood. She was panting, and could not easily speak. Her heart throbbed so violently that the bed-clothes were moved by its jerkings. The carotids were also beating strongly. On auscultation, the motions of the

heart were very tumultuous, but no evident valvular or any other morbid sound was found. The pulse was 160. I regarded the attack as plainly of a nervous character. She wanted me then to open a vein. I declined, on the ground that probably a part of the urgency of her symptoms was induced by the too frequent bleeding by some foolish predecessors. The attending physician of the hospital saw her the next day and prescribed —

Inf. valerian., ℥ij.;
Acet. opii, gr. xxx.;
Spt. ether. sulph., gtt. xl.;

to be repeated in an hour. Fomentations over the heart.

The prescription did no good, and in the evening the dyspnœa increased. At times the breath seemed to cease, the face becoming livid. The eyes were closed, and she uttered slight groans. Meanwhile the heart and carotids were intensely throbbing. Pulse 140.

℥i. mistur camph. and 60 drops laudanum every two hours.

Under this she vomited in about an hour, with relief, though the paroxysms at times returned, and the pulse fell to 120. On 22d more easy, but still some dyspnœa. The tongue was dry, the lips and gums of a bloodless hue. She was very weak. Assafetid enemata were ordered, also vin. colechii and digitalis with tinct. opii. Unfortunately, as I thought at the time, and think so now, my superior ordered me *in her presence* to bleed her, *if she thought it necessary*, and if a serious attack should again occur. Accordingly that afternoon, the remedies having been unsuccessful, she sent for me and said that the time had come, and that, according to orders received, I must bleed her. Unwillingly I opened a vein (the 94th time!). The blood flowed so freely, and was of such a pale color, that at first I feared I had acci-

dentally opened the artery. I drew eight ounces of blood, and as she had noticed at previous venesections, the stopping of the vein was very difficult. Only partial relief of the symptoms followed.

She remained in the hospital until July 7, i. e., a little more than a fortnight, and was discharged as insane. During that time she had the following symptoms: She often felt faint and had neuralgic pains in the face, neck and legs, with at times stiffness in the neck; choking sensations and vomiting occurred not unfrequently. The bowels were regular, except when acted upon violently by medicine. She had at one time some frothy sputa. She had headache and poor sleep, and finally delirium came on, at times violent with fantastic movements, dancing, &c.; at other times she would lie with her head under a pillow and call on the attendants to lay her in her coffin. She left July 7, and died about two weeks afterwards.

No disease of the heart was found; it was only slightly enlarged. The ovaries were a little diseased; the liver was normal, but larger than usual.

This, in my opinion, is one of the most infamous cases on record—one disgraceful to the profession which could be so misguided as to suppose that any such "heroic practice" could ever end save in discomfiture. Though at that time a tyro in medicine, my reason revolted then at the whole course that had been pursued, and it revolts now as I think of it, and I presume you will all agree with me.

Venesection repeated as in this case, justly caused indignant protests on the part of the profession and of the public. But is it not true, that swinging, as human reason is so apt to do, from one extreme of opinion to another, we now, after a lapse of forty years, have gone to the opposite degree, if not the same kind, of folly? We now wholly

neglect, as we formerly misused, one of the most valuable of remedies.

In order to illustrate this latter point, permit me briefly to allude to three more cases.

CASE II.

December 6, 1853, i. e., eighteen years ago, and more than twenty-two years after the case just reported, B. M., a married woman, aged thirty, entered the Massachusetts General Hospital, under my charge as attending physician. Having been previously in good health, she had been seized a week before her entrance with a severe attack of acute rheumatism of the extremities. She had also had pains in the cardiac region, and some dyspnœa from the first. The House Physician reported her as groaning with pain in the cardiac region, to which leeches and a blister had been applied. She had pains also in her knees, hips, wrists and joints of her fingers, increased by motion, but scarcely any redness or swelling of them. The pulse was 100. Her skin was hot and dry, except that a slight sweat was on the face. The tongue was dry, with a thick, yellowish white coat. The House Physician ordered :—*Opii i.*, *ipêcac 1-4*, every four hours.

Next morning I found her suffering agonizing orthopnœa. The respirations were seventy-two per minute, short and cut off by pain in the cardiac region. Six leeches had been applied over the heart and were then bleeding freely. No dejection for two days. Pulse 108, very small and uneven, evidently laboring. The sounds of the heart were distant and the impulse was scarcely perceptible. No endocardial or pericardial morbid sounds could be heard. The percussion,

though imperfectly practised owing to the suffering condition of patient, was not remarkable, but it gave, perhaps, a little larger dulness than usual. The respiratory murmur was heard to the third rib of the left breast, but not below. The abdomen was quite tympanitic, the sound of it extending up as high as the nipple. Some bronchial respirations without râles in the lower parts of both backs, and on percussion there was rather less sound than normal in the same parts.

I stood by the side of the suffering woman; I watched her agonized expression, felt of her weak and uneven pulse and counted her catching, panting breath, cut off by the acute pain. There was evidently a rheumatic inflammation of a portion of the heart, whereby the organ seemed to be much obstructed in its movements. It was plain that something must be done speedily for her relief. The leeches and internal remedies seemed of no avail. I rapidly reviewed all, and argued as follows. This woman has a stout, able-bodied frame. She has been ill only one week. The rheumatism has attacked the heart. It has already influenced it. I cannot tell the exact condition of the organ, but it is plain from the pulse and from auscultation that it cannot move easily. Here has arisen obstruction to the circulation of the blood. Vain endeavors, on the part of nature, are now making by rapid breathing and the rapid, feeble pulse to overcome the difficulty. Is not the heart now, in fact, crammed full of blood? Can the loss of over a pint from this full-blooded, well-developed frame do any harm? Is not the organ, indeed, at this moment calling upon me by these signs to give it relief by removing a certain amount of what it is almost vainly struggling with? Can there be any harm in trying this remedy, while watching closely its effects? Would the old fathers in medicine have stood doubting as I am now? Nay, would they not have bled

her at the first moment that this condition of things commenced? Should modern professional investigations make me *discard* bleeding. I remember, moreover, that I have not bled for many years. Perhaps my lancet, if I have one in my pocket, is dull. Every one in this ward where I am now standing in doubt as to what is my duty, will be surprised if bleeding be performed, and that, too, while the leech-bites applied by my assistant are still open.

These, gentlemen, and other similar arguments flashed with lightning rapidity through my mind as I still held the pulse of my suffering patient. There was, however, really but one moment of real doubt, and I then felt sure that it was not only feasible, but that it was *my duty to my patient* to open a vein and to watch the effect. I hastily bound up the arm and bled her to sixteen ounces. The anguish of expression instantly subsided, and never returned afterwards. She could draw a full breath, and when I finished the bleeding, the pain in the side and all the *violent* symptoms had disappeared as if by magic. She leaned back upon her pillow, a little exhausted, but relieved of her previous torture. I ordered a cathartic of jalap and calomel of ten grains each, and according to the usual practice of that day I gave a compound calomel pill at night.

Sinapisms were also applied to the knees and ankles. The blood had a very firm coagulum. It was "buffed and cupped." The patient staid in the house three and one-half months, and went out "well."

It is not necessary for my object to give the history of all the subsequent phases of the disease. Suffice it to say that she never again had the same persistent dyspnoea. The venesection cut off that and also the severe cardiac pain. She did, however, occasionally have attacks of slighter dyspnoea lasting for ten or fifteen minutes at a time, with

some distress in the cardiac region. The rheumatism showed itself more distinctly, with redness and swelling of the joints. The physical signs about the heart were always somewhat obscure. A little prolongation of the first sound was at one time noticed, and a doubtful precordial rub was heard, and there was more dulness than usual in the cardiac region. There was also evidently obstruction of both of the lower lobes of the lungs, marked by bronchial respiration, a change of vocal resonance, and subsequently by râles. There was a little cough. The pulse during the venesection became fuller, and it fell in rapidity. The respiration, though relieved of its severity, remained for some time somewhat shorter and quicker than normal, but it was noted at 32, four days after the bleeding.

She had mercurials to a slight touching of the gums, and subsequently colchicum, opiates and blistering over the heart and lungs.

The great and immediate advantages of venesection in this case were manifest, and although it did not prevent certain processes from going on in the heart and lungs, it did cut off *instantly the severity of their influence over the patient*. It seemed to give to nature that aid which she needed for the processes she was at the time vainly struggling to carry on, with great agony to the patient.

The motto of our Society is, "Natura Duce." Let us remember always that while taking Nature as our guide, we must nevertheless use our own reason and not allow Nature to run riot in the way. We must in fact govern the powers of nature to our own good. The above motto, unless accepted with these limitations, has a most disastrous effect. She indicates that the loss of blood may destroy life. Blood is the pabulum whence all our energies flow. Hence we have jumped to the conclusion, that the loss of *any* of it is

always a serious *evil*, more or less prejudicial to the patient. Hence, too, has arisen on the part of opponents of venesection this protest against it under *all* circumstances. Our lancets grow dull and our young men are not taught even the process of venesection. And why?—simply because physicians formerly undertook to storm nature, as it were, by venesections, "*coup sur coup*," as Bouillaud forcibly expresses it, and now we have run far to the opposite extreme, and instrument-makers have given up the keeping of lancets, for no one bleeds.* There never was a greater folly than this almost universal protest against venesection under *all* circumstances that may arise. And this is made upon the totally false assumption that the loss of any blood is always injurious. Look for a moment at the numerous exceptions which nature herself offers us. Every month, one-half of the human beings who may be alive prove, by an exorable law of their natures, the falsity of the assertion. Every school-boy, who at puberty has his nose bleed, proves its folly. Every headache cured by epistaxis confirms the truth of my assertion. Every child born into this world forces its mother to submit to this benign law of venous depletion. Not a week passes that some surgeon does not see his patient leap up to life after a bloody operation. Why, then, all this timidity in regard to the opening a vein in the arm in cases of extreme suffering, where, for instance, there are some severe symptoms threatening death or causing extreme distress, either in acute disease, or even in chronic disease when acute symptoms are superadded and threaten life? To illustrate the latter part of the proposition, let me now present the next case.

* See Address by Dr. B. Fordyce Barker, alluded to later in this paper.

CASE III.

This case fell under my notice exactly forty years after that first related. In its record of suffering and of prompt relief from venesection, it contains an answer to almost every argument that the opposer of venesection may bring up.

Nov. 16, 1870. C. H. M., aged 36, engineer and government contractor for dredging the harbor in Boston. He was a very stout, stalwart young man. He had been accustomed to violent straining while engaged in his laborious work. His father died from intemperance at 46. His mother lived to 74, but had cough every winter. The patient had usually enjoyed good health, except that occasionally he had had rheumatism. May, 1870, he felt, while in bed at night, his throat suddenly fill with much frothy matter. It came so freely that he could not speak. He thought at first that blood was escaping, the lungs filled so rapidly. From that time he had had a cough, worse at night, with wheezing. But he had been able to work till within a few weeks. He had been for months under the treatment of quacks for "worms." My assistant, Dr. Knight, saw him late in the summer, during my absence in Europe. The patient then had much dyspnoea, and had had little sleep in consequence thereof. He could not lie down. He was, however, able to visit my office in Boston, but he suffered much in so doing. While there his respiration, according to Dr. K.'s record, was hurried and rattling. He still raised much frothy adhesive matter, more than half a pint in twenty-four hours. He had never had hæmoptysis. Some sweating at night and chills afterwards. Appetite poor; no distress from food; bowels open by injection; urine high-colored, about one pint daily. Pulse 110, full and quick. There was an

increased area of cardiac dulness. The apex was lowered and carried outward. The heart's sounds were heavy and muffled, with a loud systolic and slight diastolic murmur over the aorta. Lungs full of coarse râles, dry and moist. Tinct. iodin. over heart. Lin. camphor over chest.

R. Pulv. digitalis,
 " scillæ,
 " colchic. semin., āā gr. i. 3 t. d.

19th. Worsc. Cough troublesome.

Pulv. digitalis, gr. v.;
 " belladonna, gr. i.;
 Ferri. redacti, ʒ ij.;
 M. Ft. pil. No. xx.
 Emplast. belladonna, 4×4, over heart.

I saw him at his own house about the middle of November. He was then unable to leave his chamber, owing to orthopnoea and great suffering. He had no pain about the heart, though occasionally he had stitches through the shoulders and breast. He had had for a long time some tendency to swelling of the feet. The urine at times had been heavily laden with deposits. The cough had often been very severe, causing lividity of the face. He had been able to lie down a little the previous two nights.

At my visit he was sitting up, apparently not in very great distress. The pulse was 76 and regular, but evidently confined and small. Tongue clean. Respiration 28, regular, with a little wheeze. No œdema of the legs. Impulse of heart and flatness on percussion over large space and extending towards the left. Sound of aortic regurgitation heard down almost to the bottom of the sternum. Behind, nothing morbid excepting some coarse râles less extensive than when examined by Dr. Knight.

Last pills twice daily.

Take digitalis, gr. $\frac{1}{4}$; colchicum seeds, gr. i.; and soda bi-carbon.

$1\frac{1}{2}$ gr. at night.

Iodin. \mathfrak{Z} ss.; ether sulph. \mathfrak{Z} i. over heart.

Ordered an open wood fire for room. If cough became severe, he was to take—

\mathfrak{Z} i. p. r. n. of

R. Syrup toltan., \mathfrak{Z} ii.;
 Vin. antimon., gr. xx.;
 Fluid ext. opii, \mathfrak{Z} i.;
 Spts. ether. nitros., \mathfrak{Z} ii.

Nov. 23. Doing well till this morning, when he had a severe attack of dyspnœa, during which he almost lost his breath, and was thought dying. At my visit his pulse was full and regular; no wheezing. Full effect of iodine. Inhale vinegar and water; and if a severe attack, inhale sulphuric ether.

24th. Terrible dyspnœa. No dejection.

Jalap., gr. xii.; cream of tartar, \mathfrak{Z} i.

27th. Accesses of dyspnœa increased in severity. He had great œdema of legs and face. His nights were full of terrible suffering. The lungs seemed more obstructed. It was evident that in one of these accesses of orthopnœa he would die unless relief were obtained. As he was stout and full of blood, I urged Dr. Wheeler to bleed him in case he should have another severe attack. We had much discussion about the propriety of doing this, but all argument was effectually silenced by our united thought that though we could not hope to cure the chronic disease, there was evidence that the heart had become seriously obstructed. The final question was—shall we stand by and see him die from an attack of orthopnœa, when perhaps venesection, while it could do no harm to such a young man, would almost cer-

tainly give temporary relief, and might really help him to get over this acute attack? Our conclusion was—it cannot do permanent harm; it may do good. Hence by every principle of our art we were bound to give our patient the chance of even partial relief. An attack came on that night, and Dr. Wheeler bled him about thirteen ounces, with the greatest relief to all the symptoms. He had some pain low in the right back for a day or two afterwards, for which Dr. Wheeler cupped him to the amount of a few ounces, with still further relief. There was some rude and an approach to bronchial respiration, and some dulness on percussion in same part. But the patient *never had a violent access of dyspnœa* after the venesection. And he and the attending physicians and friends all admitted that the first step towards relief came with that operation. Soon the physical signs lessened, with improved rational symptoms. Ordered quinine gr. $\frac{1}{3}$ every three hours. Allowed to have ice cream and broths. The improvement continued in a manner most surprising to both of us. Dec. 12th, i. e. the fifteenth day after venesection, he was up and dressed, and wanted to know when he could go out of doors. He looked like a different person. He had scarcely any dyspnœa. He could lie down quietly at night. The cough and sputa were much less. He had no pains anywhere. Said he felt better than for some months past. The dropsy of the legs and face had wholly gone. Though some dulness existed in the lower parts of the right back, the râles were much less. The heart's action was more free, though the murmur was still heard and the hypertrophy was still manifest. Pulse 92, regular. He ate well and slept without an opiate. Finding himself as he thought so entirely well, he became very imprudent in spite of our persuasions to the contrary. On the 13th December, i. e. the 16th day from the venesection,

he went to Boston and walked up to one of the highest offices in State street, and there signed a contract with the United States for another four years of dredging. On the 17th, i. e. only 20 days after the venesection, I met him in the train from Portland, where he had gone "as a joke" to surprise his relations "who thought him dying." He looked a little pale, but otherwise as well as any one in the train. He walked not as an invalid, and scorned any one's assistance. Knowing his organic disease, I cautioned him very earnestly, but with little effect. He laughed at my fears, but he promised caution, which, however, I foresaw he would not take. As I left him that evening, I could not help thinking what a strange commentary his ease afforded on the *dangers* of blood-letting, about which so much is heard of late.

Continuing to act with the same recklessness, exposing himself on the sea shore in cold and wet weather, &c., he fell ill again. The dyspnoea returned. January 20th, about a month after venesection, I saw him again. He was in bed, evidently very low. He had sat up three nights expectorating bloody mucus. The heart sounds and impulse were obscure, as was the respiration also. Paroxysms of dyspnoea at times came on, lasting three-quarters of an hour, during which he became livid. Again I urged bleedings to eight to ten ounces, but he declined to allow it to be done. He continued to grow worse, with accesses of great suffering, and finally copious hæmoptysis. It seemed to me now as if nature were trying to show us, by this very symptom, what should be done, but we foolishly, as I think, shut our minds to the suggestion, and decided not to follow her counsel. The cough finally became less violent. A little delirium at last came on, and he died 24 hours afterwards. At the autopsy next day, *much fluid blood was found in*

the heart; the aortic valves were rough and insufficient, so as not to hold water; enormous hypertrophy; effusion of fluid into both pleural cavities. The lower lobe of the right lung was solidified, partly with red "hepatization" and partly with distinct "pulmonary apoplexy." In the vessels of the last were found emboli, possibly derived from the vesicle plexus where there was a broken down coagulum. The liver was slightly enlarged, and of a nutmeg aspect, of yellowish hue.

As I look back now upon the circumstances of this case, I think there was never greater folly displayed by any physician than by myself and my comrade in not *urging* venesection at our last visit. If we had only taken the motto of our Society as our guide, we should have argued somewhat in this way: Again by folly this man has put his diseased heart to performing more than it can easily do. Nature is vainly endeavoring to relieve his distress by pouring out blood in her dull and distressing way, from the pulmonary vessels, and almost choking the patient while doing so. Follow, therefore, her suggestion and open a vein and give relief again. Instantly the question presented itself: Will you continue to bleed every two weeks in a case of organic disease? If so, you put your patient in the same category as that of the young girl whose case is given in the first part of these remarks. I mentally answered this suggestion by saying — Sufficient unto each day are its duties. The two cases are not analogous. For the first, when she came under our treatment, had been bled every two weeks for two and a half years for *non-organic disease*. This latter person has organic disease, but he has been bled once only, and with great relief. He has behaved foolishly, and brought upon himself another attack. Perhaps venesection will give relief again, and after that, perhaps he will learn

wisdom, and may live three-score years and ten, even if he have aortic disease and hypertrophy. I know of some now, who have been doing all the duties of an active life for years, with more organic trouble than he has now. So I mentally argued, and yet I left him to his fate. It is true I suggested the propriety, but I spoke to unwilling ears, and had not enough confidence in my own opinion to convince my opponents. I subsequently found that the patient himself declined to submit a second time, although he had joyfully consented to the first venesection. With these reflections, I pass to my last case.

CASE IV.

It seems to me that death occurred in this case in consequence of a great obstruction to the movements of the heart. It became, consequently, *filled with blood* which it could not send forward. Venesection was not permitted. I regret this extremely. I believe that possibly life might have been saved by it, although it is true that some circumstances connected with the nature of the disease may seem at first sight to contra-indicate such treatment.

Dec. 27, 1870, I saw in consultation with Dr. —, a gentleman of this city. He was seventy-two years old. He had always been in good health, except that for some time he had had a little dyspnœa on going up stairs. He had occasionally said at such times that he thought he had some heart trouble. But he had never had any such marked signs of cardiac disease as to need a physician.

About ten or twelve days before I saw him he had driven several miles into the country and was fully exposed to a very cold wind. He returned home much chilled, and feeling as if he had taken cold. He however was able to go

to his business for a day or two, but was never well afterward. He remained at home from the third day, with oppression about the chest. This was at first slight, but it rapidly augmented, and finally obliged him to sit up and to lean forward in order to breathe at all. Meanwhile there was no marked pain anywhere, and only a slight cough. There was a little crepitus one day in the middle of the left back, which the next day had disappeared, and instead of it there were some sonorous râles in other parts of the lungs. Meanwhile the dyspnœa increased fearfully, with total inability to lie down day or night. The pulse had become small, and rose to about 100. The circulation in the extremities had gone on worse and worse, and before I saw him he was pulseless in the radials, and the hands and feet were cold. The sputa were rather viscid and rusty, one day. The sounds of the heart had been obscure, but not manifestly morbid. He had been sallow in the early part of the attack, and had taken blue pill with free dejections as the result. Subsequently he took nitre and aconite 2 drops five or six times daily, and finally he had used ammonia and carbonate of ammonia with brandy and champagne, and had inhaled oxygen.

I saw him in consultation on the evening of the 27th, the eleventh day of the disease. His mind was perfect. He was sitting leaning forward, evidently suffering greatly, with a sense of distress in the chest. He complained of no other symptoms. His feet were swollen, and pitting on pressure, and his legs up to the knees, with his hands, were of an icy coldness. The heart sounds were very obscure, and the impulse scarcely, if at all, felt. The percussion was difficult, owing to his obesity and erect position. There was no positive evidence of renal difficulty. There was simply evidence of some disease which had caused a great obstruction to the circulation of the blood, and the fact that the legs and hands

were cold and livid seemed to indicate some serious blocking up of the heart. The weak impulse and sounds were those of a heart that could not easily move. The attack was acute. I thought that the heart, being thus distended, and consequently obstructed in its free movements, called for venesection for relief. No remedy had thus far done any good. Death was imminent, unless speedy relief were obtained. Should venesection be tried, was the question of questions. He was a large, full-blooded man. Evidently he could easily lose a few ounces of blood without fear of injury. I remembered the old maxim — “a doubtful remedy is better than none.” I felt assured that the old physicians would have bled him long before I saw him. My position, therefore, in the consultation room, was that venesection should be immediately attempted. I could not advise anything else till that was tried. This was finally decided upon. Unfortunately having heard of some evil results, as he thought, from venesection, in his early days, the patient declined to have the operation done. And we, his attending physicians, had not faith enough in the proposed remedy to be willing to urge it, and to perform it or leave the patient as one refusing to submit to proffered treatment. He died in less than ten hours after my visit, having retained his consciousness to the last.

Autopsy, 10, A.M., 29th. Body fat; abdomen large, and with thick layer of fat on the parietes. Fat also about pericardium. On opening this sac, a thin patch of vivid red and recently effused lymph was seen on the left ventricle. A small quantity of opaque semi-purulent fluid with a little shreddy lymph was in the sac. *The heart was large; the right cavities were filled with dark, soft, semi-coagulated semi-fluid blood that could be partly scooped out with the hand, while other portions of it flowed freely away.*

There was much more of it than usual. In the left ventricle was also blood in considerable amount, and towards the apex was a coagulum, large, fawn-colored, and firmer than the rest, and this was intimately blended with the columnæ carneæ. The heart was very fatty, so that it was difficult even to lift it without its tearing. It broke readily under the finger; the valves were quite well. The lungs were oedematous throughout, but not otherwise diseased.

Several interesting points for discussion naturally arise on this case. Let us look at the precise condition of the organs and consider what was the cause of death, and what organ was mainly at fault. If we trace the history of the disease, and look at the post-mortem, we find a man who had had, for some time, slight cardiac symptoms, but no severe ones indicating serious organic change. This man drives, in an intensely cold day, many miles in an open buggy, as he often had done previously without any injury. But on this occasion, the weather having been very cold, he had become thoroughly chilled, and felt, to use the popular phrase, that he had taken a violent cold. Soon slight oppression about the breath was noticed, but no serious lesion of the lung was found. Suspicions of pneumonia and of bronchitis followed each other rapidly. Meanwhile, however, the pulse became very small, and the dyspnœa increased to a terrible degree, so that in about eleven days from the day of the drive, I found him suffering permanent orthopnœa, with the head thrown forward, as in organic disease of the heart. Coarse mucous râles were heard at the bases of both lungs. He was pulseless at the wrists. The heart was beating obscurely, but without morbid murmur. The legs to the knees, and the arms to the elbows, were of a deathlike coldness. He was perfectly conscious. Breathlessness and pulselessness were the prominent symptoms. The physical signs were

great obscurity about the heart, with marks of œdema of the lungs at their lower parts and of the extremities. It seemed to me as if the patient were dying from almost entire stoppage of the circulation. From the obscure movements of the heart, *I inferred that probably it was crammed with blood, which it was vainly trying to throw forward.* The conclusions to be drawn were as follows: 1st, that unrelieved, the patient would die within a few hours; 2nd, that the probabilities were that the heart was at fault, and was then laboring in vain to contract upon the mass of blood in it, and that our only chance of giving relief lay in removing some ounces of that blood, thus relieving the organ of its *extra* burden, and allowing it to contract upon its diminished contents; 3rd, I could see no possible objection to trying this remedy. The sole fear in my mind was that it was too late, and that no blood could be got from the arm. If blood could be made to flow from the vein, I had no doubt of at least temporary relief, although perhaps he might die afterwards, and I strongly urged the venesection. As I look back upon the case, I regard it as one in which medicine failed of its high functions, viz. of "curing" a patient. I use the word in its original signification as the act of "taking care of" a patient. Certainly with the results of the autopsy before me, viz. a very fatty heart, I could not hope to remove that condition, but we might possibly have removed an incubus that rested on the thus weakened organ. The patient, a hale, hearty old man a week previously, might have been restored to his usual health, and his debilitated heart might possibly have been put in the condition that it was before his exposure. But here arises the question: Is fatty degeneration of the heart *per se* an insuperable obstacle to venesection? I ask this question because this state of the heart of our patient has been cited as proof positive

that venesection would have done no good, and was wholly contraindicated in the actual case. But this is, as it seems to me, a begging of the question. On the contrary, even if we could be sure, in any case, of the existence of a fatty degeneration of the heart (which with our present means of diagnosis I believe we never can be fully sure of), I deny that that diagnosis contraindicates venesection. I ask the proof that I am wrong in taking this position. There are, in truth, no data wherefrom we can definitely answer the question, either affirmatively or negatively. Meanwhile, in support of my own views, I submit—1st, that other things being equal, we would prefer to bleed a full-blooded man as our patient was, rather than the lean Cassius-faced invalid we sometimes meet. But 2d, it may be urged that such an argument is in vain, because the fat in this case has usurped the structure of the heart, and thus has weakened its muscular powers. I admit it. But this argument acts both ways, and as much for my side of the question as for that of my adversary. I certainly would not take blood from a debilitated heart with the hope of giving strength to it, although Dr. Reid's* experiments fully prove that the removal of blood from a distended heart does give not only the opportunity for contraction, but actually stimulates the organ to renewed vigor of contraction. I therefore can see no objection to venesection in the case of a fatty heart, overwhelmed, so to speak, with *extra* work, but rather a greater reason for its use. We relieve these deteriorated muscles of their extra labor, and at the same time give them a healthy stimulus. Especially should we urge the operation when, as in the case related, the organ has had, from some exposure, the blood driven back from the superficies of the body,

* See Dr. Reid's paper, quoted below.

and owing to the softening it has become oppressed by the extra quantity thus thrown suddenly inward upon it, and becoming stuffed full, cannot send the blood back into the extremities. Arguing, *a priori*, one would think that venesection would be our first thought, in order that we might quickly withdraw some of the offending fluid. For we should thus allow the wearied and overburdened organ the time and space required for its contraction upon what remains of the blood, and enable it to send again warm fluid in free currents into the pulseless and cold extremities. This, and and this alone, gentlemen, seems to me "Rational Medicine" in such a case.

On the contrary, the whole modern system of saturating a person so situated with large doses of liquor, or temporizing with various remedies, as we are so apt to do, seems to me, in not a few cases, fraught with real mischief, until the first step towards a proper "curing" of the patient, viz., venesection, be performed.

I have thus, gentlemen, given you some of my views of the abuse and the proper use, as I deem it, of this treatment by *venesection*; *a remedy potent for mighty evil, and also for mighty good*. There is nothing good in this world which, indulged in too freely, does not become bad. Evil is good run mad. Forty years ago venesection, as practised by every one, was an unmitigated evil. It was then tried in the balance and found wanting. Forthwith all the world said, "We will have nothing to do with it hereafter;" and at the present hour we stand upon the following equally pernicious and unreasonable determination, viz., that for fear of falling into the habit of over-venesection, we will not bleed at all. Can there be any conclusion more absurd?

Meanwhile we are using other remedies with a recklessness quite equal to the venesection of former days. Subcuta-

neous injections of opiates and of other narcotics, and the internal use of the various forms of alcohol, are common everywhere. And if I mistake not, the results to the community of this over-use of these various remedies, will be at times quite as injurious to human nature as the over-bleeding of a former day. In this country we are peculiarly irrational in these respects, for, forgetting the differences of climate of the two continents, and the modifications the Anglo-saxon race undergoes on this side of the Atlantic, we have adopted much too freely, in my opinion, the ultra doctrines of Todd. I would neglect neither of these classes of remedies, neither blood-letting nor stimulants, but I would use both rationally and with a clear judgment of the necessities of each individual case.

If I mistake not the signs of the times, the position I now take will commend itself, gentlemen, to your sober second thoughts. At any rate, I rejoice to find that I am sustained by such eminent men as Dr. Richardson, President of the Medical Society of London, and Dr. Sutton of that metropolis, Dr. Fordyce Barker of New York, and Graefe of Germany, men of extensive repute and of practical good sense. Moreover, in conversation with Drs. Brown-Séquard and Lombard, I find that Modern Physiology fully sustains the views I have advanced. I will conclude what I have to say further by giving extracts from these various writers.

Dr. Richardson says,* "If blood-letting were in this day an unknown remedy, and were some man to discover it, we should receive that man as the greatest amongst us and send him to posterity as one of the lights of the age." And again he says, "The confidence of the ancients in the prac-

* Address introductory to the ninety-fifth session of the Medical Society of London, on Blood-letting as a point of scientific interest, by B. W. Richardson, M.D., F.R.S., President. (Practitioner, No. 5, November, 1868.)

tice of blood-letting, their fearlessness of any immediate danger from it, was, I believe, as well founded in truth, as the cowardice and assertion, without observation, of the present day is founded on error." He sums up as follows: "I would recall that blood-letting as a point of scientific practice is still open to us in some stages (early stages) of typhoid fever, in cases where there is a sudden tension of blood, of which sunstroke is an example; in cases of chronic congestion of the brain; in cases of acute pain from (inflamed) serous membrane; in some cases of spasmodic pain (gall-stones, &c.); in others of sudden arrest of circulation from concussion; in congestion of the right heart, and it may be in some cases of extreme hæmorrhage. Above all I claim for it a first place in the treatment of simple uræmic poisoning."

Dr. Sutton (*Medical Times and Gazette*, Dec. 18, 1869) gives cases in which bleeding was resorted to, to relieve distention of heart and passive congestion of the lungs. He ordered it, not to relieve inflammation but to cure obstructions.

Fordyce Barker, M.D. (*N. Y. Medical Journal*, Jan., 1871.) "I am gradually getting to bleed more frequently. My conviction that this resource in practice has been too much neglected by myself and others has been progressively growing for some years." Dr. B. would bleed to prevent abortion in some cases. So in renal congestions of the brain with coma and when the skin is hot, there is nothing so sure. He would bleed a woman in convulsions thirty ounces, and give claterium also. "We must not," he also declares, "avoid bleeding in some cases even if the patient is feeble. In puerperal mania, at least in some very rare cases, venesection is of the greatest benefit."

By a recent lecture delivered by one of our younger

associates (Boston Medical and Surgical Journal, Vol. vii., N. S., page 363), H. Derby, M.D., I learn that the famous Graefe of Berlin, the eminent oculist, relies very much on venesection, decided but not severe, as a means of warding off the serious inflammatory results arising sometimes after the extraction of the lens.

Finally, in support of my views, I gladly quote some experiments made by Dr. Reid some years ago.* Dr. Lombard, of this city, draws my attention to them as amply sustaining all that I have claimed. I think I am right in declaring also that Drs. Brown-Séguard and Lombard are fully convinced that modern physiology condemns emphatically the present opinions of the profession, whereby venesection is virtually abandoned. Physiology says that we are all in grievous error in this matter. Dr. Reid states, in his essay entitled "On the effects of Venesection in renewing and increasing the heart's action under certain circumstances,"† that he has observed in several experiments on the lower animals, that disgorgeing the right side of the heart, when its contractions are enfeebled or suspended, by opening the external jugular, has, in some cases, a decided effect in renewing its action, and this, he is convinced, may be of considerable practical advantage in promoting the return of the circulation under certain circumstances.

He would open the jugular in cases of asphyxia and let the blood flow only from the lower opening of the vein, so as more quickly to remove the blood. Again, there are cases in which stimulants will be of no avail till after venesection.

In conclusion of these remarks, I desire to indicate some

* Physiological, Anatomical and Pathological Researches, by John Reid, M.D. Edinburgh, 1848.

† Essay Third of above named Researches, page 51.

of the cases in which I think that venesection should be performed.

First—In all acute or chronic cases where from any cause the heart apparently becomes distended with blood and consequently the circulation is greatly impeded, whereby orthopnœa, lividity of the skin, with a very feeble, small and generally rapid pulse, mixed perhaps with other serious and distressing symptoms, are produced.

Second—It seems not uncalled for when there is a very acute pain in any part of the thorax, for example, from inflammation of the pleura, causing orthopnœa and distress, even if there be no obstruction of the heart's action. The question has often arisen in my mind whether the many cases of large pleuritic effusions which we see now-a-days, may not be due, at least in part, to our neglect of venesection during the earlier and more acute period of the disease—when pain in the side is quite severe, and all the symptoms are very marked and the pulse and temperature are increased.

Third—In violent acute cephalic symptoms, threatening serious results, when the head is hot, the face flushed, and the pulse is full and hard.

Fourth—In certain cases of threatened miscarriage, occurring at certain times during pregnancy, I know of nothing better than venesection to check the tendency. Even after hæmorrhage from the womb had actually commenced, and even when it was attended with expulsive action of the uterus, I had, many years ago, a case wholly relieved by venesection to the amount of a few ounces only.

Doubtless other cases than those that could be included in the above summary, will arise in the practice of most physicians. I only quote the above as examples of classes in which I have no doubt of the benign effects of venesection. That blood-letting is destined again to be used by the profes-

sion, I have no doubt. We shall hereafter use it "rationally." Remembering the extravagances of our fathers, we shall avoid, I trust, those follies in the application of this most powerful remedy which have so paralyzed us of the present day. That paralysis, as I sincerely believe, allows some patients now to die who might be saved by the *Rational Use of Venesection*.

